

ILLEGIB

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DECLASS REVIEW BY NIMA / DoD

M/KB 375/64
27 July 1964
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MEMORANDUM FOR: Chief, Defensive Systems Division, OSI

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ATTENTION: [REDACTED]

THROUGH: Chief, Requirements Branch, Reconnaissance Group, CGS

SUBJECT: Moscow Probable Phased Array Radar, 55-30N 36-41E

REFERENCES: (a) Requirement C-SI-4-81,426
(b) CIA/PID Project 874-64

1. This memorandum is in response to your requirement dated 20 May 1964 requesting data concerning the Probable Phased Array Radar southwest of Moscow, to include:

- a. A description and critical dimensions of the structure.
- b. An indication of the similarity, or lack of similarity, between the two faces.
- c. An estimate of the material used in the face.
- d. The distance separating the two large tower jib cranes which are visible in the photographs.

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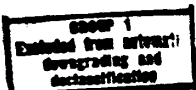
2. The photographs used in this analysis [REDACTED] The mensural data derived from these photographs and presented herein was performed by TID/NPIC.

3. The Probable Phased Array Radar is located approximately 35 nautical miles west-southwest of Moscow at 55-30N 36-41E. The probable radar appears to be a large inverted "V" shaped structure measuring approximately 410 feet in length (along the faces), approximately 390 feet in width (across the ends), and approximately 330 feet in height. The height measurement, since part of the base of the structure appears to be obscured by trees, has been estimated from a projected plane for the base which takes into consideration the average height of the foliage in this area, and the appearance of the visible portion of the structure. Each face is inclined at an angle of approximately [REDACTED] degrees from the vertical*, or [REDACTED] degrees from the horizontal, toward a top

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*It is interesting to note that the angle of slope of the face of the HEN HOUSE antenna at Sary Shagan (Radar Site 1) is approximately 25 degrees from the vertical, or 115 degrees from the horizontal (i.e. the angle of elevation of central bore sight is [REDACTED] degrees).

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which appears to be flat. An unidentified object is visible near the east end of the top. The slant height of the faces is approximately 370 feet. Basic dimensions of the structure are presented in Attachment 1.

The northwest face of the structure (the face nearest the camera, see Attachments 4 and 5) appears to be subdivided by 19 vertically inclined structural trusses, resulting in 20 vertically elongated openings. There are 15 horizontal structural members visible, forming at least 15 horizontally elongated sections. Approximately one-half of an additional horizontal section can be seen just above the trees. The horizontal members may serve a function similar to roof purlins, or they may add structural strength to the face.

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The grid-like openings in the face created by the horizontal and vertical members are nearly square. They are approximately [redacted] feet high (slant height) and approximately [redacted] feet wide, thus creating 400 grid-like openings, each measuring approximately 20 feet square (20 vertical sections and 20 horizontal sections). Insofar as it can be determined from the photography, both faces appear to be identical in size and construction.-

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Several dimensions were derived for the structural trusses which make up the northwest face of the structure. The vertically inclined trusses are approximately [redacted] feet wide (parallel to the plane of the face) and approximately [redacted] feet deep, perpendicular to the plane of the face (see Attachment 2).

4. From the photography it is apparent that some form of dark-toned surfacing material is being applied to the structure, near each end. At the eastern end of the structure, this material has thus far been applied only to the end surfaces of the structure; none has been applied to either face. This can be determined since the perspective rays of the camera vary throughout the sequence of photographs, permitting a number of different views of the structure.

The situation which exists at the western end of the structure cannot be described with as much certainty. However, it is thought that this dark-toned material has been applied both to the end surfaces, and probably to small portions of both faces. The material on the northwest face has been applied in a narrow vertical strip, approximately 20 feet wide, which is quite close to the end of the face, and does not extend to the top of the face. The material which has been applied to the southeast face appears similar in size, appearance, and location, except that a vertical gap can be detected. This is either located between two strips of material, or between the material on the face, and the actual edge of the face.

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On the east end of the structure, the surfacing material which has been applied to the end surface on the north leg protrudes approximately [REDACTED] feet out past the external edge of the structural truss which forms the north leg (see Attachment 3). Likewise, the roof of the structure also protrudes in a similar manner. It may overhang the face along the entire length of the roof, but this cannot be confirmed. This situation does not exist on the southwest corner of the structure, and it cannot be determined whether or not it exists on the northwest and southeast corners. No determination can be made concerning the type or texture of this dark-toned surfacing material.

5. One of the large tower jib cranes, probably the one closest to the camera, is a traveling crane. This is apparent from the relationship of the two cranes as seen from several different views. In several photos, one crane can be seen approximately midway along the face of the structure. In these photos, the tip of the boom protrudes above the probable radar structure, indicating that the crane traverses along the outside of the structure, rather than within it. Since at least one of these cranes is capable of lateral movement, the distance separating the two cranes is variable.

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6. The photo analyst on this project is [REDACTED] who may be contacted on extension 2079 should you have any further questions concerning this project.

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7. This project is considered to be complete. [REDACTED]

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Enclosures:

- 1 - Three (3) line drawings
(CIA/PID/MEB-P-637/64 thru P-639/64)
- 2 - Two (2) photographs
(CIA/PID/MEB-P-621/64 and P-622/64)

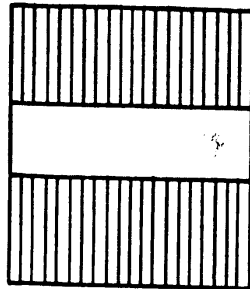
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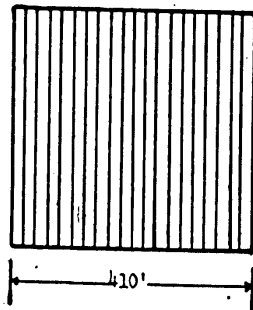
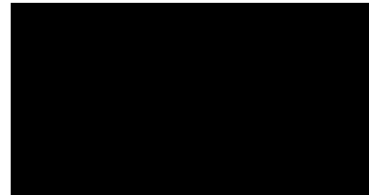
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MOSCOW PROBABLE PHASED ARRAY RADAR
(BASIC DIMENSIONS)

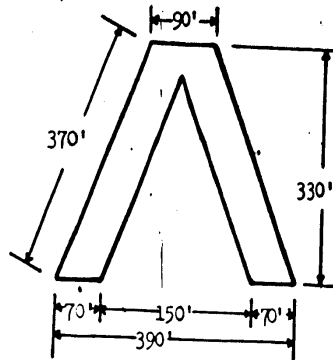


PLAN VIEW

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SIDE VIEW

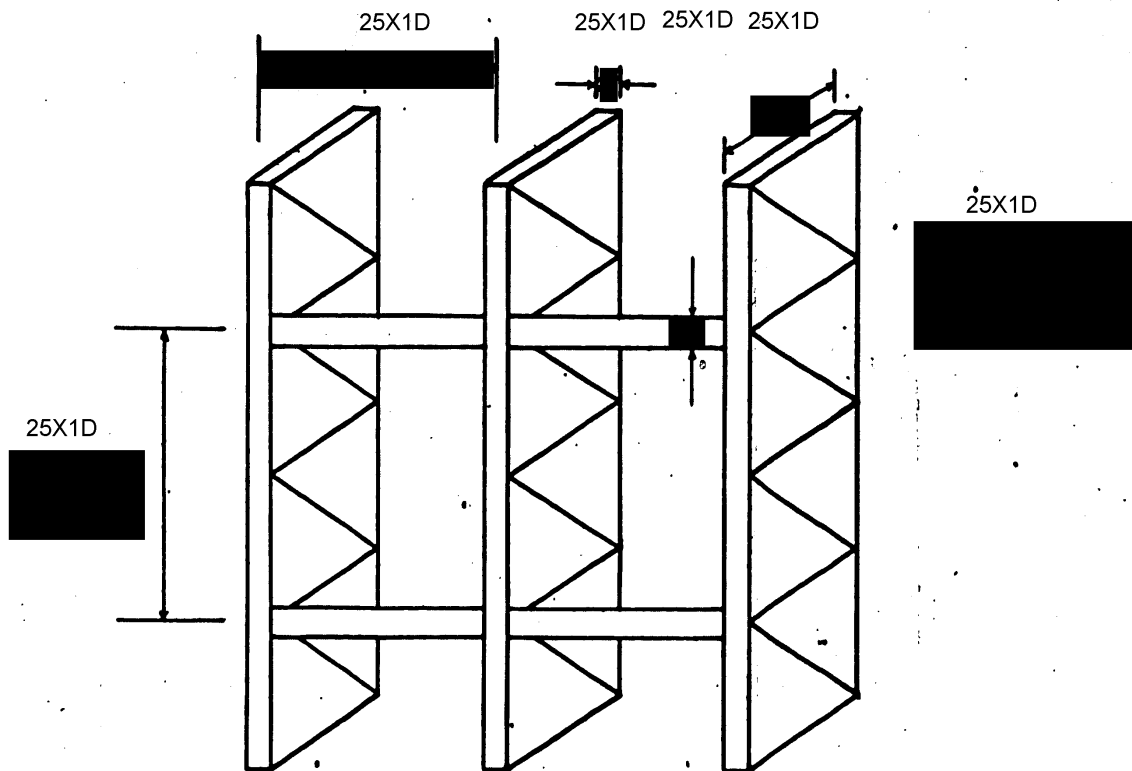


END VIEW

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MOSCOW PROBABLE PHASED ARRAY RADAR
(DIMENSIONS OF STRUCTURAL TRUSSES AND OPENINGS IN THE NORTHWEST FACE)



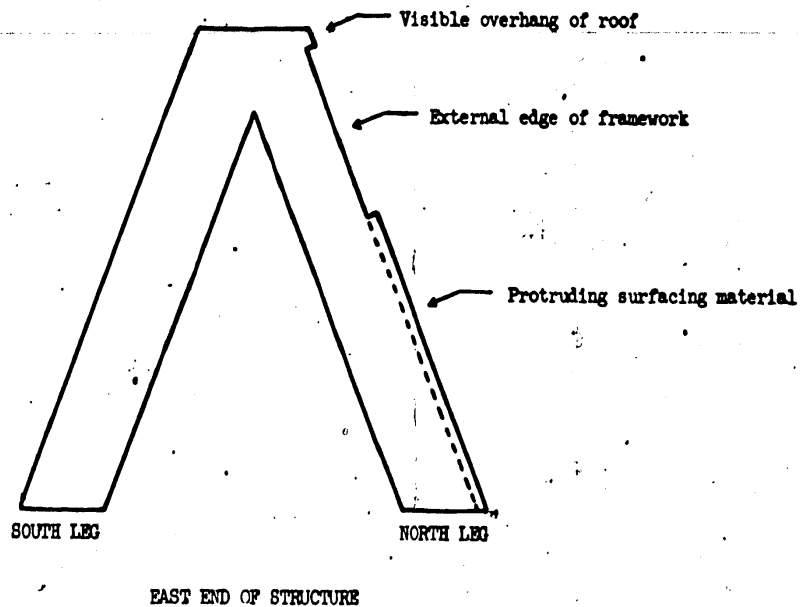
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Attachment 2
CIA/PID/MEB-P-638/64

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MOSCOW PROBABLE PHASED ARRAY RADAR
(END VIEW)



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Attachment 3
CIA/PID/MEB-P-639/64

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MOSCOW PROBABLE PHASED ARRAY RADAR
Approximately 35 km WSW of Moscow at
55-29N 36-41E

Attachment 4.
CIA/PID/WEB-P-621/04

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MOSCOW PROBABLE PHASED ARRAY RADAR
Approximately 35 nm WSW of Moscow at
55-29N 36-41E

Attachment 5.
CIA/PID/MEB-P-622/64